In the Claims:

1. (Amended) A vertical cavity surface emitting laser (VCSEL) comprising:

a vertical cavity region,

an active region;

a contact region in at least one side of the active region providing current to be distributed through the active region;

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a stabilizer module for stabilizing the gains among a plurality of modes induced by spatial power instability by increasing the current through the contact region;

and a pumping means for exciting the CVSEL laser to emit light.

VCSEL

7. (Amended) A method for stabilizing modes in VCSEL, said method comprising:

generating a plurality of modes within said VCSEL;

determining whether the modes in the VCSEL are unstable based on changes in operating characteristics of the VCSEL;

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generating an adjustable bias current for stabilizing the modes in the VCSEL; and

adjusting bias current of the VCSEL to stabilize the modes to compensate for the changes in the operating characteristics.

10. (Amended) The method as recited in claim 7 wherein the VCSEL is used in high-speed communication links over a multimode fiber.

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11. (Amended) A system for stabilizing modes in a VCSEL, said system comprises:

a first module in communication with a VCSEL, wherein said first module is used for determining whether the modes in the VCSEL are unstable based on changes of the operating characteristics; and

A3 Cont'd

a second module in communication with a VCSEL, wherein said second module is used for adjusting bias current of the VCSEL to stabilize the modes to compensate for the changes in the operating characteristics.

no period

13. (Amended) The system as recited in claim 11 wherein the bias current is adjusted up to the saturation level of the VCSEL.

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14. (Amended) The system L as recited in claim 11 wherein the VCSEL is used in applications of 1.2 Gb/s and 2.5 Gb/s frequencies.

16. (Amended) A stabilizer module in communication with a VCSEL, the stabilizer module comprising:

a power module for measuring spatial and spectral power of the VCSEL;

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a determination module for determining whether the spatial and spectral power of the VCSEL is unstable because of modal gains; and

a current module for increasing bias current to a level where the VCSEL is stable if it is determined that the VCSEL is not stable.

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19. (Amended) The stabilizer module as recited in claim 16 wherein the VCSEL is used in applications of 1.2 Gb/s and 2.5 Gb/s frequencies.

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21 (New) A vertical cavity means in accordance with claim 1, wherein said vertical cavity is defined by a plurality of mirror stacks.